

# **MobileCollect<sup>TM</sup>**

## **Xpress Setup**

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# **User's Guide**



# MobileCollect Xpress Setup Program

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Created: Monday, February 19, 2018 at 2:19 PM in Sunriver, Oregon.

***This User's Guide has been formatted for double-sided printing.***



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# 1 Introduction

The MobileCollect Xpress Setup Program is used to set up and configure the MobileCollect Bases and Mobile Modules. The MobileCollect Xpress Setup Program does not support the GageWay Wireless System. You must use the MobileCollect Extended Setup Program to configure MobileCollect Command Mobile Modules (when command Mode is enabled), Remotes and GageWay Wireless components..

To install this program, select the MobileCollect Xpress Setup Program on the MobileCollect CD and follow the instructions. If you install the Setup Program on a network drive rather than a local drive on your PC, you may not have access to Help files associated with the Setup Program. This Help file access limitation is due to restrictions Microsoft has placed on accessing html Help files (.chm) on network drives.

The Xpress Setup Program provides access to the most common setup features required by most users to configure their Mobile Modules (Mini, Digital and RS-232) and Bases (USB, USB MicroBase and RS-232). The Xpress Setup Program is easier to use and we strongly recommend that you take a look at this program. If the features you require are not supported by the Xpress Setup Program, you must use the Extended Setup Program.

## Mobile Collect User's Guides

There are several User's guides that cover MobileCollect operation and setup. All of these User's Guides are available as PDF documents and the User's Guides can also be accessed from the various MobileCollect software utilities. The User's Guides for MobileCollect are as follows:

- MobileCollect Quick Start User's Guide
- MobileCollect Hardware Components User's Guide
- MobileCollect Xpress Setup User's Guide (this document)
- MobileCollect Extended Setup User's Guide
- MobileCollect RF Sniffer User's Guide

## Using Multiple Setup Programs

There are 2 different Setup Programs that could be used to configure a MobileCollect system. However, you must not use both of these Setup Programs to configure a Base and its Mobile Modules. If you use both of the Setup Programs to configure a Base and its Mobile Modules, the results may not be what you expect. The rules for the use of the Setup Programs is simple.

**Use Xpress Setup or Extended Set to configure a Base and its Mobile Modules. Do not use both of these programs.**

### User's Guide Organization

This User's Guide covers the MobileCollect Xpress Setup Program. This document has been designed for double-sided printing. If you print this document single sided, there will be several blank pages included in the printout.

If you are viewing the PDF version of this User's Guide, you will see page numbers to the right of links within the PDF document. For example the number to the right of the [Contact MicroRidge Systems](#)<sup>25</sup> link indicates the actual page number this link is directed to.

## 2 Getting Started

After installing the Xpress Setup Program, there are a few tasks that should be done before you try to configure MobileCollect. Following these steps now, will save you later frustration and confusion.

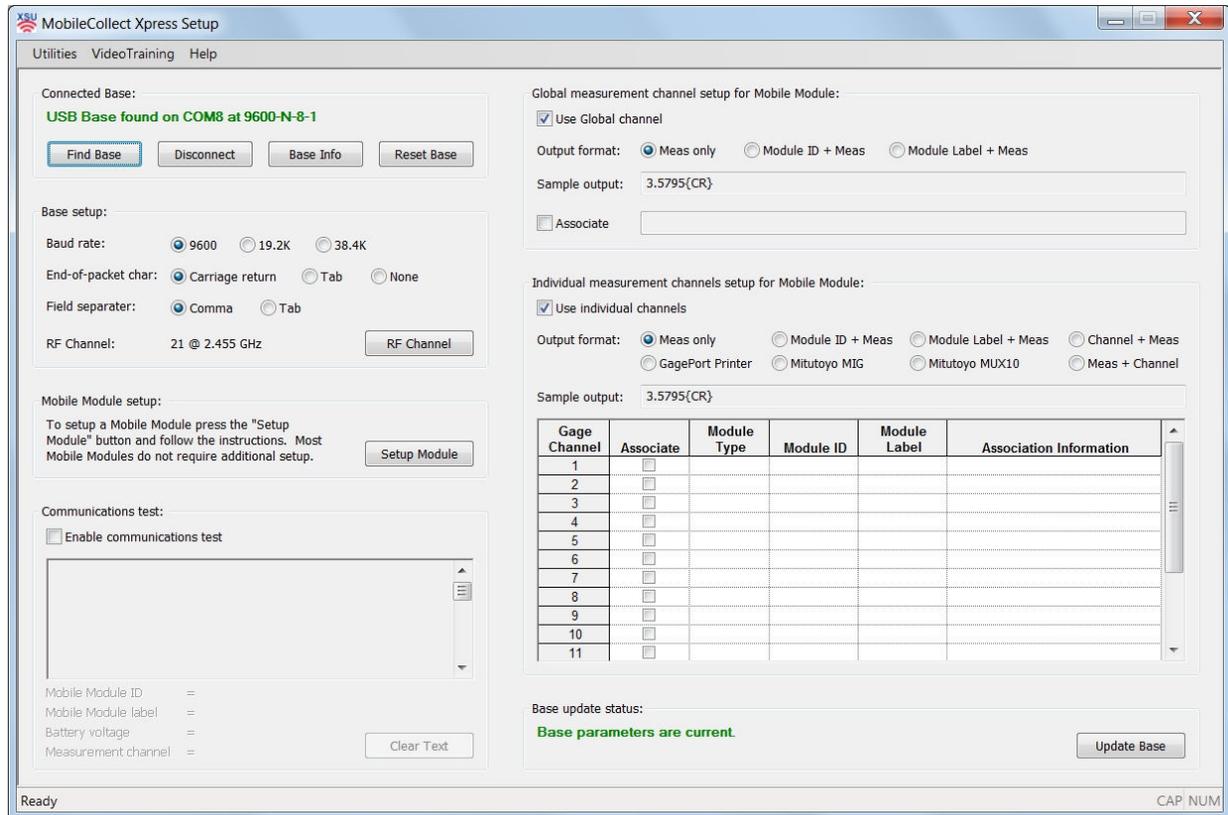
- If you need to install a serial to USB cable, do it now by following the instructions included with the serial to USB cable. The RS-232 Bases require an RS-232 serial connection to your computer and if you do not have a physical serial port, you must install a serial to USB cable. If the serial to USB cable was purchased from MicroRidge, you must install the USB drivers before connecting the cable to your PC.
- If you are using a USB Base or USB MicroBase, you must install the USB drivers included on the MobileCollect CD. These USB drivers must be installed before connecting the USB Base to your PC.
- When searching for a connected Base or Remote, the Setup Program will only look at the serial ports that are checked in the Available Serial Ports dialog. You can access this dialog by selecting the *Utilities/Available Serial Ports* menu item. Be sure the serial ports that you want to use are checked.
- If you have installed a serial to USB cable and you do not see it in the list of ports, verify that the adapter is plugged into a USB port on your PC. If the USB adapter is installed, try rebooting your computer and/or reinstalling the USB drivers.

In some cases you will not have to use the Setup Program to configure MobileCollect. If all of the following are true, you do not have to use the Setup Program.

- The baud rate for the Base needs to be the default value of 9600-N-8-1.
- You want to use the default channel 21 for your wireless communications.
- You only need the measurement from a Mobile Module sent to your PC. You do not need other items such as Module ID, battery condition, channel identifier, etc.
- You will be associating the Mobile Modules with the Base by using the Association on the Fly method. Refer to the Hardware Components User's Guide for more information about Association on the Fly.



### 3 Main Display



The Xpress Setup Program consists of the main window shown above and dialogs for channel selection and Mobile Module Configuration. If you make any changes to the parameters, the Base update status message in the lower right-hand portion of the window will change from "Base parameters are current" to "The Base parameters have been modified". These changes are not sent to the Base until you press the *Update Base* button.

#### Required Firmware Versions

Xpress Setup requires that the Bases and Mobile Modules be at or above a minimum version number. The minimum supported version numbers are shown in the *Help/About Xpress Setup* menu item. If Xpress Setup tries to connect to or communicate with a Base or Mobile Module with an unsupported version number, you will get a dialog that shows the version numbers and gives you the option to update the firmware. The firmware update utilities can also be accessed from the *Utility/MobileCollect Firmware Updates* menu. Refer to [Firmware Updates](#)<sup>22</sup> section for more information.

## Connected Base

Press the Find Base button to locate the Base connected to your computer. The find Base process will only look at the serial ports that have been checked in the [Available Serial Ports](#)<sup>21</sup> dialog. To view information about the connected Base, click the Base Info button.

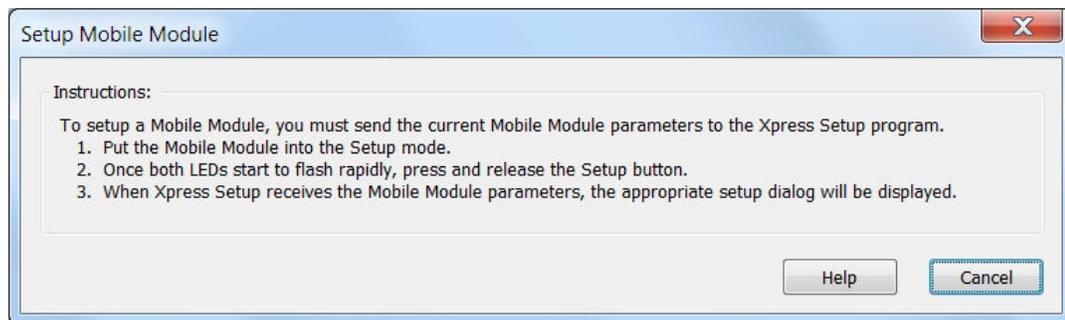
## Base setup

The Base setup sets the communications, output data format and RF channel. If you make a change to the *End-of-packet char* or *Field separator*, the sample outputs displayed for the Global and Individual channels will display the format changes.

Normally you do not need to change the RF channels from the default value of 21. If you do change the RF channel, you will have to re-associate any Mobile Module that was previously associated with the Base. Refer to the [RF Channels](#)<sup>8</sup> section for more information.

## Mobile Module setup

If you need to set up a Mobile Module or view the setup currently in a Mobile Module, you will need to put the Mobile Module into the [Setup Mode](#)<sup>11</sup>. Once the Mobile Module is in the Setup Mode, press the [Setup Module button](#)<sup>13</sup> and the following dialog will appear.



After this dialog appears, press the Setup button on the Mobile Module. The Mobile Module will send setup information to the Base and the appropriate setup dialog will be displayed. If the version number of the Mobile Module firmware is below the minimum, an option to [update the Mobile Module firmware](#)<sup>22</sup> will be displayed.

Refer to the [Mobile Module Setup](#)<sup>14</sup> section for a description of the setup options.

## Communications test

The Communication test section is a simple test program that lets you view measurement information that is being received from a Mobile Module. In addition to the measurement, the Module ID, Module Label, Battery voltage and Measurement channel are also displayed. You cannot use the Communication test feature to send commands to the Base. If you want to send commands to the Base or view the Base or Mobile Module copyright information you should use [ComTestSerial](#)<sup>24</sup>.

### Global measurement channel setup for Mobile Module

If a Mobile Module is associated via the Global Channel, no channel number information is available as part of the packet sent to the host computer. However, you can select an output format that does contain the Module ID or Module Label.

To Associate a Mobile Module via the Global Channel, check the Associate box, put the Mobile Module into the [Setup Mode](#)<sup>11</sup> and press the Setup button. If the Association is successful, an appropriate message will be displayed. When a Mobile Module is Associated with the Xpress Setup Program, the RF channel number will be automatically set to match the RF channel number for the Base.

### Individual measurement channel setup for Mobile Module

If a Mobile Module is associated with an Individual Channel, the channel number information is available as part of the packet sent to the host computer. If you want the channel number sent to the host computer, be sure to select an output format that contains the channel number information.

To Associate a Mobile Module with an Individual Channel, check the Associate box in the grid, put the Mobile Module into the [Setup Mode](#)<sup>11</sup> and press the Setup button. If the Association is successful, an appropriate message will be displayed. When a Mobile Module is Associated with the Xpress Setup Program, the RF channel number will be automatically set to match the RF channel number for the Base.

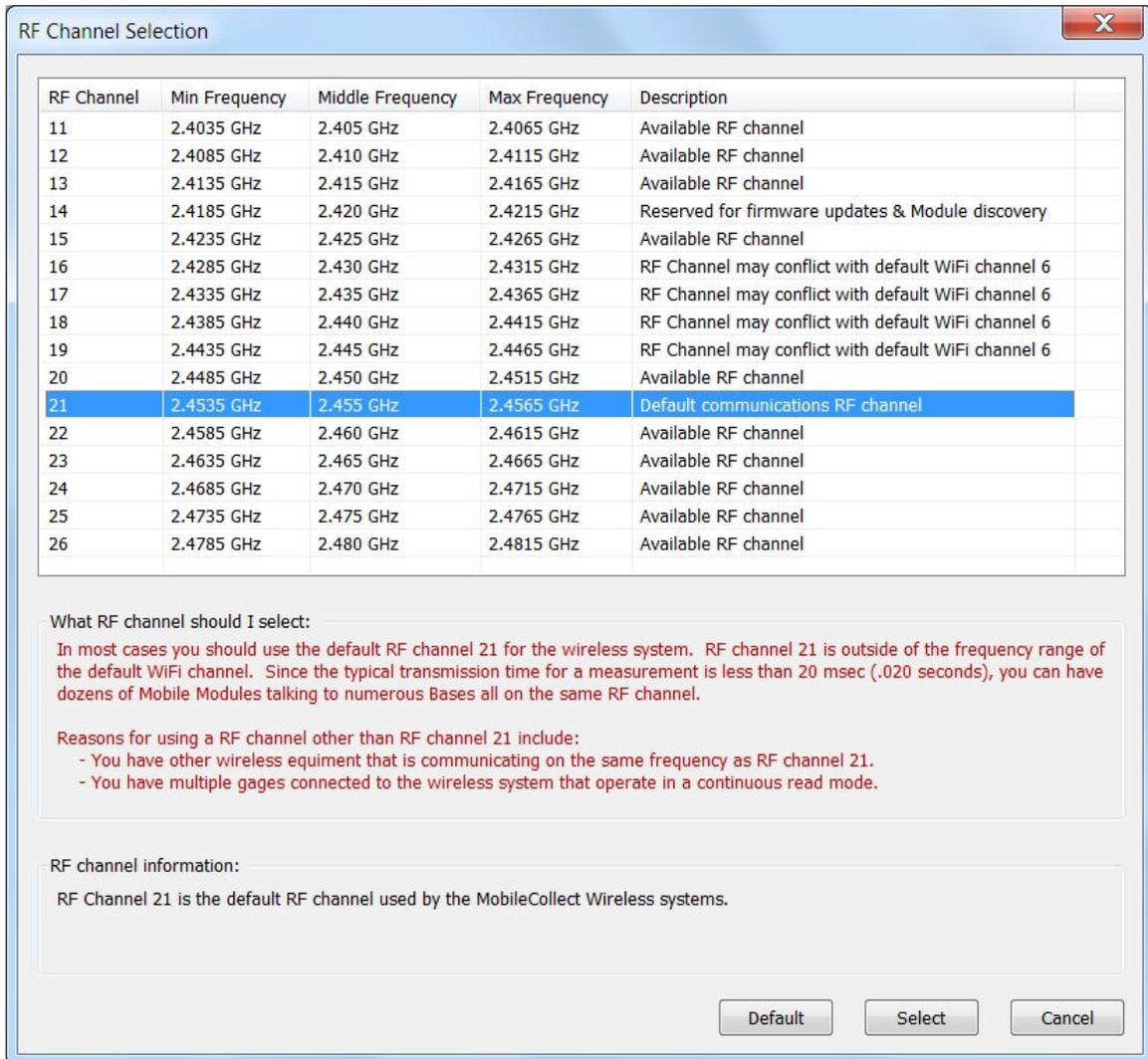
### Base update status

If you make any changes to the Base setup (excluding Association), you must tell Xpress Setup to send these changes to the Base. If you have unsaved changes to the Base, you will not be able to Associate any Mobile Modules with the Base.

### Video Training Menu

Several training videos are available to assist you in using a Mobile Module with the Xpress Setup Program. It is recommended that you view each of the videos prior to using the Setup Program.

### 3.1 RF Channels



The RF channels that can be used by MobileCollect range from channels 11 to 26. Two of the channels have specific designations as shown below.

- Channel 14 This channel is reserved for wireless firmware updates of the Mobile Modules and for parameter transfer. This channel is not used to send any measurement information.
- Channel 21 This is the default communications channel when units are received from MicroRidge.

Some of the WiFi wireless network systems also use channels that overlap with the MobileCollect channels. The default WiFi channel is 6. WiFi uses a different channel number system and each WiFi channel covers a wider frequency range. As shown in the table above, WiFi channel 6 will overlap 4 of the MobileCollect channels. In many cases, a WiFi network can use the same channel used by a MobileCollect installation. To help you identify the best

channels to use for MobileCollect, you can run some tests with the [MobileCollect RF Channel Sniffer](#)<sup>23</sup> program.

### 3.1.1 What RF Channel Should I Use

The answer is simple. Try the default channel 21 and if it works, use it. The transmission duty cycle for sending a measurement is very short. Normally the total time that the transmitters are active for a measurement is less than 20 msec (0.020 seconds). If you take 1,000 measurements in an 8-hour period, MobileCollect will be transmitting data for a total time of about 20 seconds.

Sometimes it may be necessary to use a channel other than 21. The reasons to select another channel could include the following.

- You have other equipment that is communicating on the same frequency as channel 21 and you do not want anything else using the channel 21 frequency.
- You have multiple MobileCollect Bases that are receiving measurements via a continuous read mode. You may need to use channels other than 21 for some of the Bases and Mobile Modules.
- You are sending commands from a Base to a Command Mobile Module (CMM), and you are sending measurements from a Digital Mobile Module or RS-232 Mobile Module to another Base. It is recommended the Base and its CMMs be on a different channel than the other MobileCollect units.

If you are not sure how much wireless traffic you have in your facility, you should use the [MobileCollect RF Channel Sniffer](#)<sup>23</sup> to determine the RF activity.



## 4 Mobile Modules

Xpress Setup supports the following Mobile Modules.

- Mini Mobile Module
- Digital Mobile Module
- Command Mobile Module with Command Mode disabled
- RS-232 (V2) Mobile Module

Gaining access to the Mobile Module Setup dialogs is the same for all of the Mobile Modules. The Setup dialog for each of the Mobile Modules vary based on the requirements of the Mobile Module.

### 4.1 Association & Setup Mode

A Mobile Module must be associated with a Base before the Base will accept measurements from the Mobile Module. The association information (RF channel number, Base network serial number and Base PAN ID) is stored in the Mobile Module. When the Mobile Module sends a measurement to a Base, the address information for the target Base is included in the wireless packet sent by the Mobile Module. The wireless packet sent by a Mobile Module may be received by several Bases; however, only the Base that matches the association information will process the measurement packet.

There are 3 methods that can be used to associate a Mobile Module with a Base.

- 1) Associate-on-the-fly.
- 2) Use the Xpress Setup Program.
- 3) Use the Extended Setup Program. Refer to the Extended Setup User's Guide for more details.

### Mobile Module Setup Mode

All of the Mobile Module association methods require the Mobile Module to be placed into the Setup Mode. The picture below shows a Digital Mobile Module. However, the LED and button arrangement is the same on all of the Mobile Modules.



### Mobile Module Buttons and LEDs

To put the Mobile Module into the Setup Mode follow the steps below:

- Press & hold the Setup button. The Setup button is the button closest to the gage cable.
- While you continue to press the Setup button, press and release the Read button.
- Once both LEDs start to flash, release the Setup button.
- When the Setup Mode is active, both LEDs will flash rapidly. The left LED is red and the right LED is green.

### Associate-on-the-Fly

This is a very quick and easy method used to associate a Mobile Module with a Base. With this method, you can associate a Mobile Module with a Base without using any special setup software. This method can be used with the USB Base and RS-232 Base. This method cannot be used with the USB MicroBase since the MicroBase does not have a Reset button.

- Put the Mobile Module into the Setup Mode.
- Be sure no other Mobile Modules are sending measurements to the Base.
- Press and release the Reset button on the back of the USB Base or RS-232 Base.
- When the left status LEDs (green/green/green) go out and the right LEDs (red/yellow/green) are all on, press and release the Setup button on the Mobile Module.

- If the association was successful, the LEDs (red/green) on the Mobile Module will blink 5 times and all of the Base LEDs, except for the green Pwr LED will be off.
- If the Base does not receive an association request, it will automatically exit the association mode after 10 seconds.

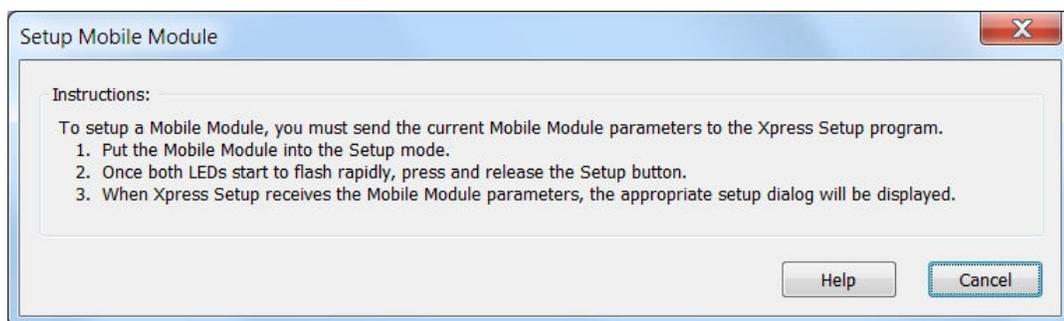
### Associate Using Xpress Setup

If you are Associating a Mobile Module with a Base via the Xpress Setup Program, follow the steps below.

- Press the *Find Base* button
- Put the Mobile Module into the Setup Mode.
- Check the Associate box in the Global Channel section or an Individual Channel Associate in the grid.
- Press and release the Setup button on the Mobile Module.
- If the Association was successful, an appropriate message will be displayed.

## 4.2 Setup Module Button

Mobile Modules can be set up after a Base has been found. To set up a Mobile Module, put the Mobile Module into the [Setup Mode](#)<sup>11</sup> and click the *Setup Module* button. After the following dialog appears, press the Setup button on the Mobile Module.



When you press the Setup button on the Mobile Module and the Mobile Module data is successfully received by the Base one of the following will occur.

- If the Mobile Module is an Mini, Digital or RS-232 Mobile Module and the firmware is the proper version, the appropriate Setup dialog will be displayed.
- If the Mobile Module is a Command Mobile Module and the Command Mode is enabled, you will be asked if you want to disable the Command Mode. Xpress Setup does not support the Command Mode in the Command Mobile Modules. When the Command Mode is disabled, a Command Mobile Module functions the same as a Digital Mobile Module.
- If the Mobile Module firmware version is older than the minimum supported version, you will be asked if you want to update the firmware in the Mobile Module. Refer to the [Firmware Updates](#)<sup>22</sup> section for more information.

- If the Mobile Module is a GageWay Universal Mobile Module, a dialog will be displayed indicating that Xpress Setup does not support GageWay Wireless.

### 4.3 Continuous Read & TIR

Read Mode Setup

Read mode:

- Single read with button press
- Continuous read: Press read button to start. Release read button to stop.
- Continuous read: Press & release read button to start. Press & release read button to stop.

Continuous read mode & TIR:

Gap between readings

- Use gap times from 10 to 10000 msec
- Use gap times from .05 to 130.00 minutes

Delay prior to first reading  (1 to 30 seconds)

Total read time  (1 to 4000 seconds)

Total number of readings  (1 to 3000)

Note: 1,000 msec = 1 second

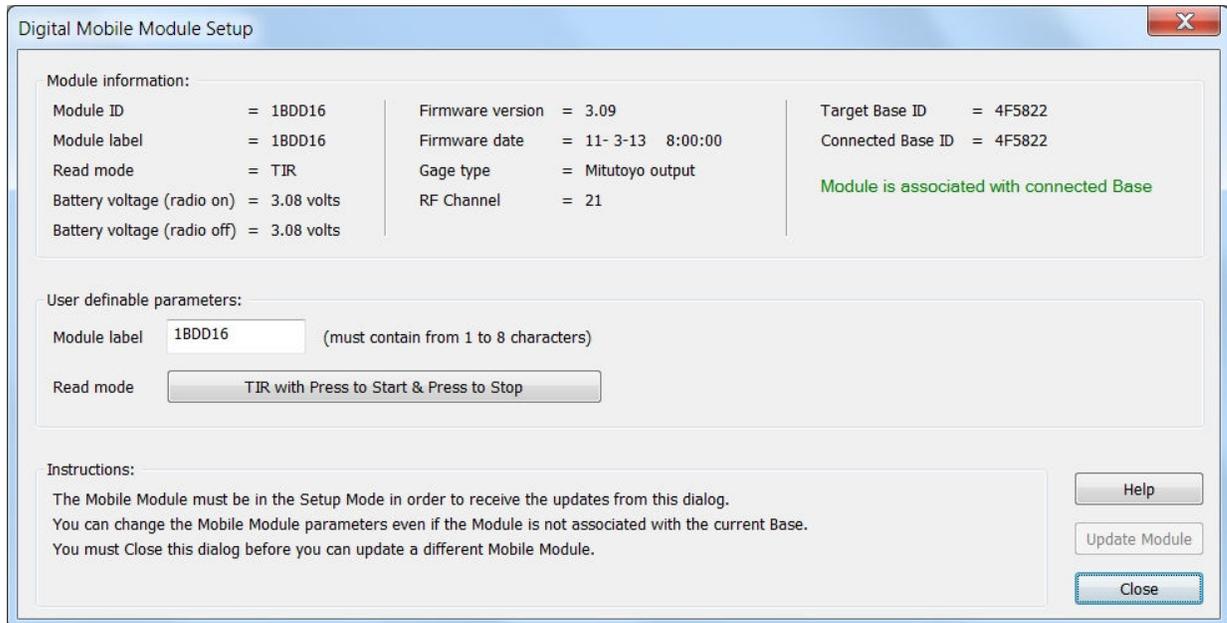
Enable TIR When TIR is enabled, data is only transmitted at the end of the read cycle.  
Data sent: Number of readings, Minimum value, Maximum value, Range  
Example: 53,1.0235,1.0310,.0075

All of the Mobile Modules support continuous read and TIR. This dialog can be accessed from the setup dialog for each of the Mobile Modules.

### 4.4 Mobile Module Setup Dialogs

The setup dialogs for the Mobile Modules vary based on the requirements of the specific Mobile Module. The following sections describe the setup options available for the Mobile Modules. All of the Mobile Modules support [Continuous Read and TIR](#)<sup>14</sup>.

### 4.4.1 Digital Mobile Module Settings



The Digital Mobile Module was discontinued in April 2016. If a Command Mobile Module is used with Xpress Setup, the Command function is automatically turned off and the Command Mobile Module with function like the discontinued Digital Mobile Module.

The items that can be configured for a Digital Mobile Module consist of the following.

- |              |   |
|--------------|---|
| Module Label | This label can be up to 8 characters in length and can be sent to the host computer as part of the measurement data.  |
| Read Mode    | The read mode can be set to single (default), continuous, and TIR. Refer to the <a href="#">Continuous Read &amp; TIR</a> <sup>14</sup> section for more details. |

If changes are made to the Mobile Module parameters, the *Update Module* button will be enabled. If you have made changes to the parameters and try to exit this dialog, a dialog will be displayed and you will be asked if you really want to exit the Setup dialog.

## 4.4.2 Mini Mobile Module Settings

**Mini Mobile Module Setup**

Module information:

Module ID = BEA4AF	Firmware version = 4.10	Target Base ID = D12039
Module label = BEA4AF	Firmware date = 3-31-17 7:36:57	Connected Base ID = D12039
Read mode = Single	Gage type = Mitutoyo output	
Battery voltage (radio on) = 2.63 volts	RF Channel = 21	
Battery voltage (radio off) = 2.92 volts		

Note: To maximize battery life, the Mini Mobile Module is turned off after this dialog is displayed.

Module is associated with connected Base

User definable parameters:

Module label:  (must contain from 1 to 8 characters)

Read mode:

Mini Mobile Module gage output type:

Enable gage output type selection

**Various Cables See Gage Help**

<input type="radio"/> Federal Maxum	<input type="radio"/> Mahr Pocket Surf IV	<input type="radio"/> Opto Duplex
<input type="radio"/> Insize Caliper	<input type="radio"/> Mahr Serial	<input type="radio"/> Opto Simplex
<input type="radio"/> Insize Indicator	<input type="radio"/> Mahr uMaxum II	<input type="radio"/> Starrett TTL
<input type="radio"/> Insize 2-Button Micrometer	<input checked="" type="radio"/> Mitutoyo output	<input type="radio"/> TruPosition
<input type="radio"/> Insize 3-Button Micrometer	<input type="radio"/> Ono Sokki	

The type of gage output must be specified by the user for the Mini Mobile Module. Several of the gage output formats can be found on gages from different manufacturers.

Gages from other manufacturers such as CDI, LMI, etc. also produce gages that have a Mitutoyo compatible output. If your gage is manufactured by Mitutoyo, it will have a Mitutoyo output. Mitutoyo uses several different connector styles for their gage cables.

Instructions & Battery Information:

The Mobile Module must be in the Setup Mode in order to receive the updates from this dialog.  
 You can change the Mobile Module parameters even if the Module is not associated with the current Base.  
 You must Close this dialog before you can update a different Mobile Module.

The items that can be configured for a Mini Mobile Mobile consist of the following.

- |              |   |
|--------------|---|
| Module Label | This label can be up to 8 characters in length and can be sent to the host computer as part of the measurement data.  |
| Read Mode    | The read mode can be set to single (default), continuous, and TIR. Refer to the <a href="#">Continuous Read &amp; TIR</a> <sup>14</sup> section for more details.   |
| Gage Type    | Unlike the other Mobile Modules, you must specify the type of gage output for the Mini Mobile Module. It is rare that you will need to select a new gage output type. Refer to <a href="#">Gage Output Type</a> <sup>17</sup> for more information. |

If changes are made to the Mobile Module parameters, the *Update Module* button will be enabled. If you have made changes to the parameters and try to exit this dialog, a dialog will be displayed and you will be asked if you really want to exit the Setup dialog.

#### 4.4.2.1 Gage Output Type

The screenshot shows a dialog box titled "Mini Mobile Module gage output type:". It contains a checkbox labeled "Enable gage output type selection" which is checked. To the right of this checkbox is a "Gage Help" button. Below the checkbox is a grid of radio button options for gage output types. A yellow box on the left side of the dialog contains the text "Various Cables" and "See Gage Help". The selected option is "Mitutoyo output". To the right of the radio buttons is a text area with the following text: "The type of gage output must be specified by the user for the Mini Mobile Module. Several of the gage output formats can be found on gages from different manufacturers. Gages from other manufacturers such as CDI, LMI, etc. also produce gages that have a Mitutoyo compatible output. If your gage is manufactured by Mitutoyo, it will have a Mitutoyo output. Mitutoyo uses several different connector styles for their gage cables."

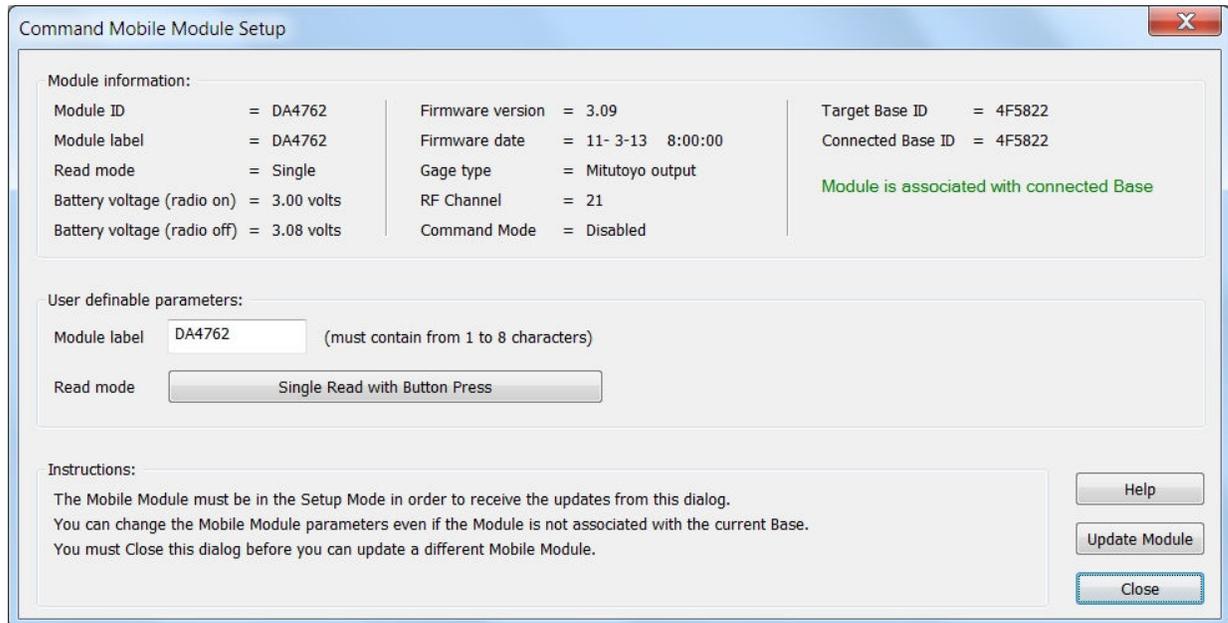
Radio Button Label	Selected
Federal Maxum	No
Insize Caliper	No
Insize Indicator	No
Insize 2-Button Micrometer	No
Insize 3-Button Micrometer	No
Mahr Pocket Surf IV	No
Mahr Serial	No
Mahr uMaxum II	No
Mitutoyo output	Yes
Ono Sokki	No
Opto Duplex	No
Opto Simplex	No
Starrett TTL	No
TruPosition	No

The Mini Mobile Module requires the user to define the gage cable output type. When a Mini Mobile Module is shipped from the factory it is configured for the gage cable attached to the module. The only time a you may need to select a gage output type is when you change from one brand of gage to another.

- Example 1      You have been using the Mini Mobile Module with a Mitutoyo caliper and you now want to use the Mini Mobile Module with a Mahr uMaxum II. You will need to get the uMaxum II cable from MicroRidge and select the Mahr uMaxum II gage in the above dialog.
- Example 2      You have been using the Mini Mobile Module with a Mitutoyo caliper and you now want to use the Mini Mobile Module with a Mitutoyo Digital Indicator. You will need to get the appropriate gage cable from MicroRidge, but you do not have to change the gage output type. All of the Mitutoyo gage use the same output format.

Most of the gage output types can be identified by comparing the gage cable connector with the pictures in the Mini Mobile Module Setup dialog. Since Mitutoyo has a wide range of connectors used with its gages, it is not reasonable to show all of the possible gage cable connectors. When you purchase a replacement Mini Mobile Module gage cable, the gage output type will be clearly identified with the replacement cable.

### 4.4.3 Command Mobile Module Settings



The items that can be configured for a Command Mobile Mobile consist of the following. Since Xpress Setup only supports the Command Mobile Module when the Command Mode is disabled, the setup for the Command Mobile Module is the same as the setup for the Digital Mobile Module.

Module Label	This label can be up to 8 characters in length and can be sent to the host computer as part of the measurement data.
Read Mode	The read mode can be set to single (default), continuous, and TIR. Refer to the <a href="#">Continuous Read &amp; TIR</a> <sup>14</sup> section for more details.

If changes are made to the Mobile Module parameters, the *Update Module* button will be enabled. If you have made changes to the parameters and try to exit this dialog, a dialog will be displayed and you will be asked if you really want to exit the Setup dialog.

#### 4.4.4 RS-232 Mobile Module Settings

**RS-232 Mobile Module Setup**

Module information:

Module ID = C1CAE1	Firmware version = 3.09	Target Base ID = 4F5822
Module label = C1CAE1	Firmware date = 11- 3-13 8:00:00	Connected Base ID = 4F5822
Read mode = Single	Gage type = Unknown Gage Type	Module is associated with connected Base
Battery voltage (radio on) = 3.00 volts	RF Channel = 21	
Battery voltage (radio off) = 3.08 volts		

Module setup:

Module label:  (must contain from 1 to 8 characters)

Baud rate:  Communication parameters:  End-of-packet character:

Command:  If a command is entered, it will be sent to the serial device when the Mobile Module Read button is pressed. Maximum length = 5 characters. Use {CR} for a carriage return. Refer to Help for more information.

Read mode:  The Read mode can only be configured if a Send command is defined.

Find first numeric field  Decimal point required in numeric field (A numeric field must be at least 3 characters in length)

Instructions:

The Mobile Module must be in the Setup Mode in order to receive the updates from this dialog.  
 You can change the Mobile Module parameters even if the Module is not associated with the current Base.  
 You must Close this dialog before you can update a different Mobile Module.

Buttons: Help, Update Module, Close

#### When Do You Need to Configure the RS-232 (V2) Mobile Module?

For most RS-232 devices you will need to configure the RS-232 Mobile Module through the dialog shown above. The type and format of the data sent from serial devices can vary widely. You may need to refer to the manual for your serial device to determine items such as baud rate, communication parameters, data format, end-of-packet character and how to get a reading from the serial device. If you have a cable that allows you to connect your serial device to a PC serial port, you may find it useful to use [ComTestSerial](#)<sup>24</sup> to verify the operation of your serial device.

If your gage uses the Sylvac Proximity cable, the only item that can be modified is the Module label. A photo of the Proximity connector is shown below. This type of cable can be found on gages such as calipers and digital indicators from manufacturers such as Sylvac, Fowler, Starrett, etc. Due to the voltage level requirements of this cable, it can only be used with the RS-232 Mobile Module.



**Sylvac Proximity Connector**

### Configuring the RS-232 (V2) Mobile Module

The items that can be configured for an RS-232 Mobile Mobile consist of the following.

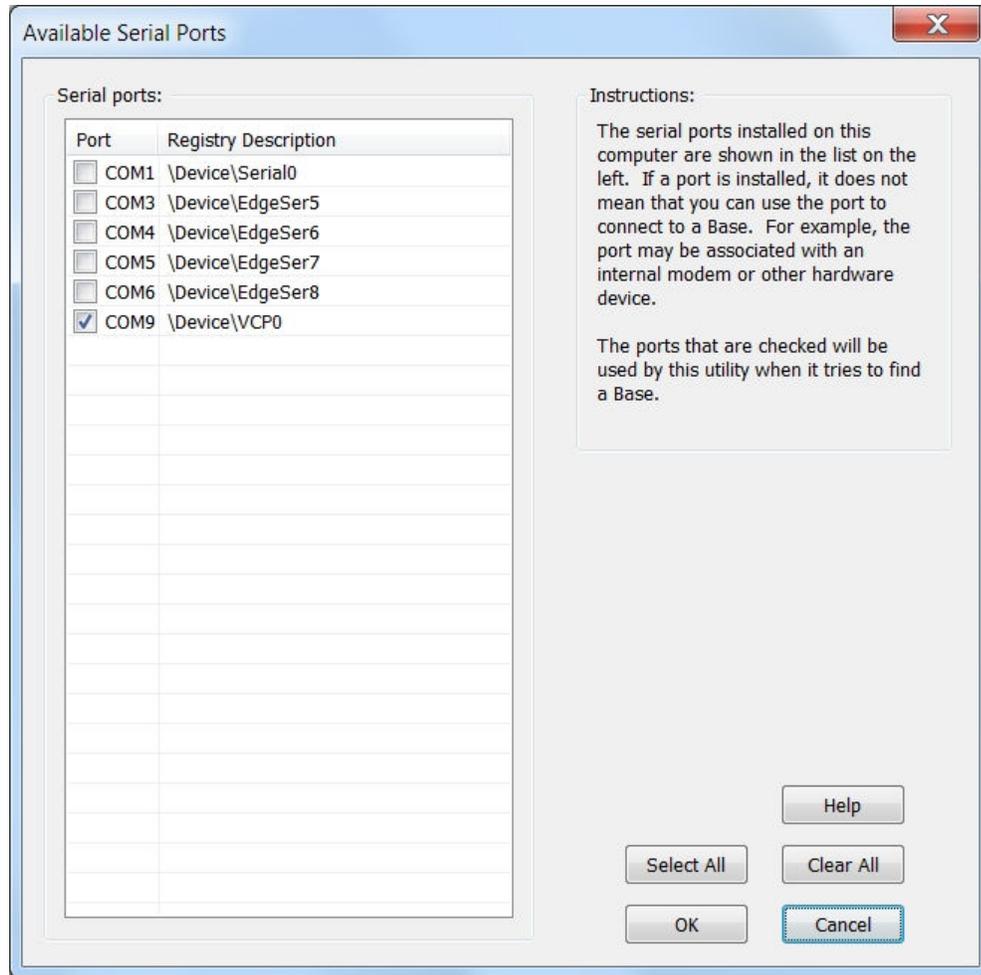
Module Label	This label can be up to 8 characters in length and can be sent to the host computer as part of the measurement data.
Communications	Baud rate (1200, 2400, 4800 or 9600) and communication parameters (N-8-1, N-7-1, E-7-1, E-7-2, O-7-1 OR O-7-2).
End-of-Packet	End-of-packet character (carriage return, line feed or tab)
Command	Command to be sent to the serial device when the Read button on the Mobile Module is pressed. If this field is blank, you must press a print or send button on the connected serial device.
Read Mode	The read mode can be set to single (default), continuous, and TIR. Refer to the <a href="#">Continuous Read &amp; TIR</a> <sup>14</sup> section for more details. This option is only available if a command has been defined.
Numeric field	The measurement packet received by the Mobile Mobile can be parsed to locate the first numeric field. If a numeric field is found, only the numeric field is sent to the Base. A numeric field must be at least 3 characters in length. The first character can be a blank. A decimal point is required in the field if this option is checked.

If changes are made to the Mobile Module parameters, the *Update Module* button will be enabled. If you have made changes to the parameters and try to exit this dialog, a dialog will be displayed and you will be asked if you really want to exit the Setup dialog.

## 5 Utilities

The Utilities Menu provides access to items for setup, firmware updates and testing. If you are troubleshooting a MobileCollect Base or Mobile Module with MicroRidge technical support, there is a good chance that you will need access to these utilities.

### 5.1 Available Serial Ports



The Xpress Setup Program will test the checked serial ports when it tries to find a Base. Most PCs have only 1 or 2 serial ports and in this case you probably could let Xpress Setup check all of the available ports. However, as in the example shown above, you may want to specify what ports can be tested to see if a Base is connected. When Xpress Setup locates a Base, the program will remember the serial port number and this serial port will be the first one tested each time the program looks for a Base.

## 5.2 Firmware Updates

Two different radio modules have been used in the MobileCollect wireless products. When MobileCollect was introduced in 2010, the radio module that was used was the ATZB Radio Module from Atmel. Due to advances in the radio module chips, MicroRidge designed the new RM2.4 Radio Module and started shipping this new module in selected products in January 2016. As of February 2018, all of the MobileCollect products have been redesigned to utilize this new RM2.4 Radio Module. The new RM2.4 Radio Module supports the features of the MobileCollect ATZB based products and most of the features of the older GageWay Wireless. The RM2.4 Radio Module is based on newer technology and provides greater resources for program features and helps ensure a long life for MobileCollect Wireless. Products that contain the RM2.4 Radio Module can be identified by the following logo on the product label.



RM2.4 Logo Displayed on products containing the RM2.4 Radio Module

In order to use Xpress Setup with MobileCollect Bases and Mobile Modules it is suggested that you are using the latest firmware versions for your Bases and Mobile Modules. When you installed Xpress Setup, you also installed firmware update utilities for MobileCollect Bases and Mobile Modules that use the RM2.4 Radio Module.

There are 2 methods for getting access to the firmware update utilities.

- Access the firmware update utilities from the *Utilities* menu.



- Go to the MicroRidge web site at [www.microridge.com/wl\\_downloads.htm](http://www.microridge.com/wl_downloads.htm) and download the desired firmware update.

### 5.3 RF Channel Sniffer

The MobileCollect RF Channel Sniffer allows you to determine the amount of RF activity occurring on each of the RF channels that can be used by MobileCollect. The Sniffer takes 500 RF measurements on a channel and determines for each measurement if there was any RF activity. After the RF measurements are taken on a channel, the Sniffer moves to the next channel and repeats the process. It takes approximately .096 seconds (96 msec) to capture the 500 RF measurements on a channel. The total time to scan all 16 channels is about 1.6 seconds. The RF Channel Sniffer does not use or communicate with Mobile Modules.

The Sniffer is only compatible with the following base units:

- MobileCollect USB Base
- MobileCollect MicroBase
- MobileCollect RS-232 Base

MobileCollect operates in the 2.45 GHz Industrial, Scientific and Medical (ISM) radio band. This frequency is also used by other wireless equipment such as WiFi. If you are not using other 2.45 GHz equipment in your facility, you would not need to use the Sniffer to determine the best channels to use. However, if you have other wireless systems operating in the 2.45 GHz band, it is a good idea to run the Sniffer to determine the activity levels on the available channels.

Refer to the MobileCollect RF Sniffer User's Guide for a full description of this program.

**MobileCollect RF Channel Sniffer -- COM9 @ 9600-N-8-1**

Channel	Frequency Midpoint, GHz	Total Meas	Sample Periods	Total Time, hr:min:sec	Active Time, hr:min:sec	Active Time, Percent	Total Time for Each Channel Utilization Range, hr:min:sec or seconds									
							0.0 to 1.0 %	1.1 to 3.0 %	3.1 to 5.0 %	5.1 to 10.0 %	10.1 to 25.0 %	25.1 to 50.0 %	50.1 to 75.0 %	75.1 to 100.0 %		
1	11	2,405	1,413,000	2,826	4:20	0:05	2.0%	0:25	3:54	.5 sec	5 sec	2 sec				
2	12	2,410	1,413,000	2,826	4:20	0:05	2.0%	0:25	3:54	.1 sec	.9 sec	.3 sec				
3	13	2,415	1,413,000	2,826	4:20	0:05	2.0%	0:27	3:51	.4 sec	.8 sec	.6 sec				
4	14	2,420	1,413,000	2,826	4:20	0:05	2.1%	0:24	3:54	.3 sec	.9 sec	.5 sec	.1 sec			
5	15	2,425	1,413,000	2,826	4:20	.2 sec	.1%	4:18	4 sec	.3 sec	.7 sec	.2 sec				
6	16	2,430	1,413,000	2,826	4:20	.1 sec	0%	4:18	4 sec	.3 sec	.5 sec	.4 sec				
7	17	2,435	1,413,000	2,826	4:20	.2 sec	.1%	4:18	2 sec	.3 sec	.4 sec	.5 sec				
8	18	2,440	1,412,500	2,825	4:20	.1 sec	0%	4:18	2 sec	.3 sec	.5 sec	.3 sec				
9	19	2,445	1,412,500	2,825	4:20	.1 sec	0%	4:19	2 sec	.5 sec	.2 sec	.2 sec				
10	20	2,450	1,412,500	2,825	4:20	.1 sec	0%	4:19	1 sec		.6 sec	.3 sec				
11	21	2,455	1,412,500	2,825	4:20	.1 sec	0%	4:19	.1 sec	.1 sec	.2 sec	.5 sec				
12	22	2,460	1,412,500	2,825	4:20	.1 sec	0%	4:18	5 sec	.1 sec	.1 sec	.4 sec				
13	23	2,465	1,412,500	2,825	4:19	.1 sec	0%	4:19	2 sec	.1 sec	.2 sec	.2 sec				
14	24	2,470	1,412,500	2,825	4:19	.1 sec	0%	4:19	2 sec	.1 sec	.4 sec	.3 sec				
15	25	2,475	1,412,000	2,824	4:19	.2 sec	.1%	4:18	2 sec		.2 sec	.6 sec	.3 sec			
16	26	2,480	1,412,000	2,824	4:19	.3 sec	.1%	4:17	.7 sec		.6 sec	.4 sec	.5 sec			

**Summary information:**

Avg sample size = 500.0 measurements

Avg sample period = .0919 seconds

Test start date = 10-22-2013

Test start time = 6:29:10 AM

Test duration = 1:11:04 hr:min:sec

**Color codes:**

= Last channel updated

= Last cell modified for channel

= Excellent channel for MobileCollect

= Acceptable channel for MobileCollect

**Time formats:**

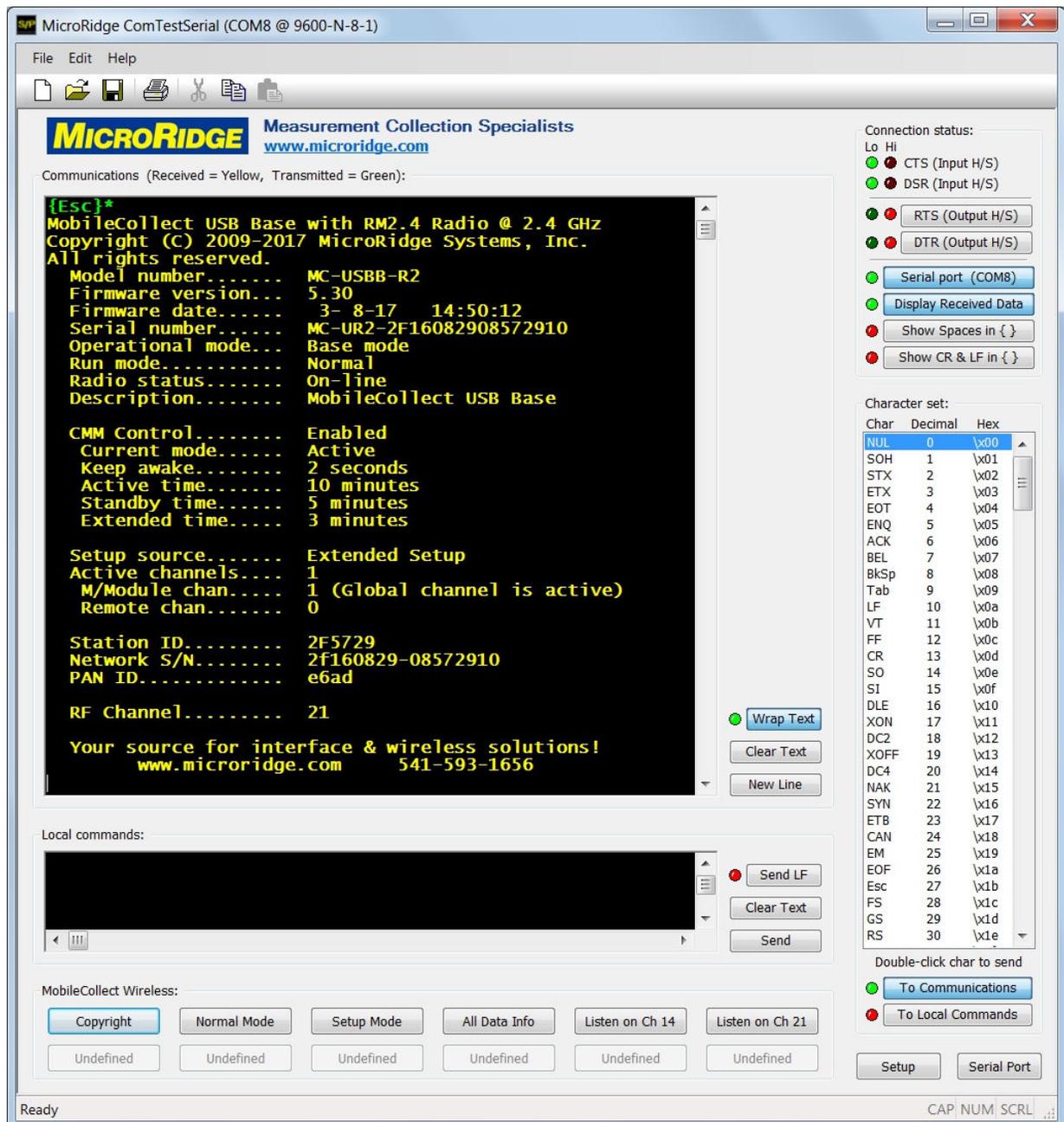
Several time formats are used to display the time intervals. These consists of hours:minutes:seconds (1:45:15), minutes:seconds (12:03) and seconds (1.3 sec). The seconds format is only used for time intervals less than 2.0 seconds.

Buttons: About, Print, Serial Port, Help, Start, Clear, Close

## 5.4 ComTestSerial

A serial communications test program is included on the MobileCollect CD and will be installed when you install the Xpress Setup Program. ComTestSerial can be started directly from the Xpress Setup Utility menu.

ComTestSerial can be loaded on as many computers as required. To install ComTestSerial on other computers, select the ComTestSerial installation option on the CD. ComTestSerial is designed for use on Windows XP and later.



## 6 Contact MicroRidge

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**Shipping Address:**

MicroRidge Systems, Inc.  
56888 Enterprise Drive  
Sunriver, OR 97707

Note: There is no mail delivery to this address. This address should only be used for package delivery services such as UPS, FedEx, etc.

**Web:** [www.microridge.com](http://www.microridge.com)



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